



SEQUENCE LISTING

<110> Anderson, Christen M.
Davis, Robert E.
Clevenger, William
Wiley, Sandra Eileen
Willer, Scott W.
Szabo, Tomas R.
Ghosh, Soumitra S.
Moos, Walter H.
Pei, Yazhong

<120> PRODUCTION OF ADENINE NUCLEOTIDE TRANSLOCATOR (ANT),
NOVEL ANT LIGANDS AND SCREENING ASSAYS THEREFOR

<130> 660088.420C1

<140> US 09/393,441

<141> 1999-09-08

<160> 37

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 894

<212> DNA

<213> Homo sapien

<400> 1

atgggtgatc acgttggag cttcctaaag gacttcctgg ccggggcggt cgccgctgcc	60
gtctccaaga cccgcgtcgc ccccatcgag agggtaaacac tgctgctgca ggtccagcat	120
gccagcaaac agatcagtgc tgagaagcag tacaaaggga tcattgattt tgggtgaga.	180
atccct.aagg agcagggttt cctctccttc tggaggggta acctggccaa cgtgatccgt	240
tacttccccca cccaaagctct caacttcgccc ttcaaggaca agtacaagca gctttctta	300
gggggtgtgg atcggcataa gcagttctgg cgctactttt ctggtaacct ggcgtccgg	360
ggggccgctg gggccacccgc cctttgtttt gtctaccgc tggactttgc taggaccagg	420
ttggctgctg atgtgggcag gcgcgcggcag cgtgagttcc atggcttgaa cgactgtatc	480
atcaagatct tcaagtctga tggcctgagg gggctctacc agggtttcaa cgtctgttc	540
caaggcatca ttatctatag agctgcctac ttccggatct atgatactgc caagggatg	600
ctgcctgacc ccaagaacgt gcacatttt gtgagctgaa tgattgcca gagtgtgacg	660
gcagtcgcag ggctgctgtc ctacccttt gacactgttc gtcgtagaat gatgatgcag	720
tccggccgga aaggggccga tattatgtac acggggacag ttgactgctg gaggaagatt	780
gcaaaagacg aaggagccaa ggccttcttc aaaggtgcct ggtccaatgt gctgagaggc	840
atgggcggtg cttttgtatt ggtgttgtat gatgagatca aaaaatatgt ctaa	894

<210> 2

<211> 897

<212> DNA

<213> Homo sapien

<400> 2

atgacagatg cccgattgtc cttcgccaaag gacttcctgg caggtggagt ggccgcagcc	60
atctccaaga cggcggttagc gcccattcgag cgggtcaagc tgctgctgca ggtgcagcat	120

gccagcaagg	agatcactgc	agataagcaa	tacaaaggca	ttatagactg	cgtggtcgt	180
atccccaaagg	agcaggaagt	tctgtccctc	tggcgcggt	acctggccaa	tgtcatcaga	240
tacttccca	cccaggctct	taacttcgccc	ttcaaagata	aatacaagca	gatcttcctg	300
ggtgtgtgg	acaagagaac	ccagtttgg	cgctacttg	caggaatct	ggcatcggt	360
ggtgcgcag	ggcccacatc	cctgtgttt	gtgtaccctc	ttgattttgc	ccgtaccctg	420
ctagcagctg	atgtgggtaa	agctggagct	gaaaggaaat	tccgaggcct	cggtgactgc	480
ctggtaaga	tctacaaatc	tgtatggatt	aaggcctgt	accaaggctt	taacgtgtct	540
gtcagggtt	ttatcatcta	ccgagccgcc	tacttcggta	tctatgacac	tgcaaaggga	600
atgctccgg	atcccaagaa	caactcacatc	gtcatcagct	ggatgatcgc	acagactgtc	660
actgctgtt	ccgggttgac	ttcctatcca	tttgacacccg	ttcggccgcg	catgatgatg	720
cagtcaaggc	gcaaaggaaac	tgacatcatg	tacacaggca	cgcttgactg	ctggcggaaag	780
attgctcggt	atgaaggagg	caaagctttt	ttcaagggtt	catgtccaa	tgttctcaga	840
ggcatgggtt	gtgttttgt	gtttgtctt	tatgtgaaa	tcaagaagta	cacataaa	897

<210> 3

<211> 897

<212> DNA

<213> Homo sapien

<400> 3

atgacggaaac	aggccatctc	cttcgc当地	gacttcttgg	ccggaggcat	cgccgc当地	160
atctccaaga	cggccgtggc	tccgatcgag	cgggtaagc	tgctgctgca	ggccagcac	120
gccagcaagg	agatcgcgc	cgacaaggcag	tacaaggca	tcgtggactg	cattgtccgc	180
atccccaaagg	agcagggcgt	gctgtccctc	tggagggca	accttgccaa	cgtcattcgc	240
tacttccca	ctcaaggccct	caacttcgccc	ttcaaggata	agtacaaggca	gatcttcctg	300
gggggcgtgg	acaaggcacac	gcagttctgg	aggtactttg	cgggcaacct	ggcctccggc	360
ggtgcggccg	gcgcgacctc	cctctgtttc	gtgtaccctc	tggattttgc	cagaaccgc	420
ctggcagcgg	acgtggaaa	gtcaggcaca	gagcycgagt	tccgaggcct	gggagactgc	480
ctggtaaga	tcaacaaatc	cgacggcatac	cgggcctgt	accaggcctt	cagtgtctcc	540
gtcagggtt	ttatcatcta	ccggccggcc	tacttcggc	tgtacgatac	ggccaaaggc	600
atgctcccg	atcccaagaa	caactcacatc	gtggtgagct	ggatgatcgc	gcagaccgt	660
acggccgtgg	ccggcgtgg	gtcctaaaa	ttcgacacccg	tgcggccggc	catgatgatg	720
cagtccggc	gcaaaggagc	tgacatcatg	tacacggca	cgcttgactg	ttggagaaag	780
atttcagag	atgagggggg	caaggcctt	ttcaagggtt	cgtggtccaa	cgtcctgcgg	840
ggcatggggg	gcgccttcgt	gtgttttgt	tacgacgagc	tcaagaaggt	gatctaa	897

<210> 4

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 4

ttatatctcg	agtatgggtt	atcacgctt	gagttccta	aag	43
------------	------------	-----------	-----------	-----	----

<210> 5

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 5
tatataggta ccttagacat atttttgat ctcatcatac aac 43

<210> 6
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 6
ttatatctcg agtatgacag atgccgctgt gtccttcgcc aag 43

<210> 7
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 7
tatataggta ccttatgtgt acttcttgat ttcatcatac aag 43

<210> 8
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 8
ttatatctcg agtatgacgg aacaggccat ctccttcgcc aaa 43

<210> 9
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 9
tatataggta ccttagagtc acttcttga gtcgtcgta cagg 44

<210> 10
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence primer

<400> 10	
tatgccatag cattttatac c	21
<210> 11	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Sequence primer	
<400> 11	
cgcacaaaaca gccaagct	18
<210> 12	
<211> 45	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Mutagenic oligonucleotide primer	
<400> 12	
ggagatggcc tgttccgtca tcttatcgta atcgtcgtac agatc	45
<210> 13	
<211> 45	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Mutagenic oligonucleotide primer	
<400> 13	
gatctgtacg acgatgacga taagatgacg gaacaggcca tctcc	45
<210> 14	
<211> 35	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> PCR primer	
<400> 14	
cccgaaaaat tctgatgacg gaacaggcca tctcc	35
<210> 15	
<211> 34	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> PCR primer	

<400> 15	
cccgggctcg agttagagtc actttcttga gctc	34
<210> 16	
<211> 41	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> PCR primer	
<400> 16	
ttataggatc catgacggaa caggccatct cttcgccaa a	41
<210> 17	
<211> 41	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> PCR primer	
<400> 17	
ttaaagaatt cttagatcac cttcttgagc tcgtcgta a g	41
<210> 18	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Sequencing primer	
<400> 18	
aatgataac catctcg	18
<210> 19	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Sequencing primer	
<400> 19	
acttcaagga gaatttcc	18
<210> 20	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Sequencing primer	

```

<400> 20
acttcgcctt cacggata . 18

<210> 21
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequencing primer

<400> 21
tacggccaag ggcattct . 18

<210> 22
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequencing primer

<400> 22
tgaagcggaa gttcctat . 18

<210> 23
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequencing primer

<400> 23
atgccgggttc ccgtacga . 18

<210> 24
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic oligonucleotide primer

<400> 24
ggcctgttcc gtcatcttat cgtcatcgta g . 31

<210> 25
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic oligonucleotide primer

```

<400> 25		
cgacgatgac gataagatga cggaacaggc c		31
<210> 26		
<211> 41		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> PCR primer		
<400> 26		
ttaaagaatt catgacggaa caggccatct ctttcgccaa a		41
<210> 27		
<211> 41		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> PCR primer		
<400> 27		
ttataggatc cttagatcac cttcttgagc tcgtcgtaca g		41
<210> 28		
<211> 42		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> PCR primer		
<400> 28		
ttaatggta ccatgacgga acaggccatc tccttcgcca aa		42
<210> 29		
<211> 42		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> PCR primer		
<400> 29		
ttatactcga gttagatcac cttcttgagc tcgtcgtaca gg		42
<210> 30		
<211> 15		
<212> PRT		
<213> Artificial Sequence		
<220>		
<223> Synthetic polypeptide		

<400> 30
 Cys Trp Arg Lys Ile Phe Arg Asp Glu Gly Gly Lys Ala Phe Phe
 1 5 10 15

<210> 31
 <211> 297
 <212> PRT
 <213> Homo sapien

<400> 31
 Met Gly Asp His Ala Trp Ser Phe Leu Lys Asp Phe Leu Ala Gly Ala
 1 5 10 15
 Val Ala Ala Ala Val Ser Lys Thr Ala Val Ala Pro Ile Glu Arg Val
 20 25 30
 Lys Leu Leu Leu Gln Val Gln His Ala Ser Lys Gln Ile Ser Ala Glu
 35 40 45
 Lys Gln Tyr Lys Gly Ile Ile Asp Cys Val Val Arg Ile Pro Lys Glu
 50 55 60
 Gln Gly Phe Leu Ser Phe Trp Arg Gly Asn Leu Ala Asn Val Ile Arg
 65 70 75 80
 Tyr Phe Pro Thr Gln Ala Leu Asn Phe Ala Phe Lys Asp Lys Tyr Lys
 85 90 95
 Gln Leu Phe Leu Gly Gly Val Asp Arg His Lys Gln Phe Trp Arg Tyr
 100 105 110
 Phe Ala Gly Asn Leu Ala Ser Gly Gly Ala Ala Gly Ala Thr Ser Leu
 115 120 125
 Cys Phe Val Tyr Pro Leu Asp Phe Ala Arg Thr Arg Leu Ala Ala Asp
 130 135 140
 Val Gly Arg Arg Ala Gln Arg Glu Phe His Gly Leu Gly Asp Cys Ile
 145 150 155 160
 Ile Lys Ile Phe Lys Ser Asp Gly Leu Arg Gly Leu Tyr Gln Gly Phe
 165 170 175
 Asn Val Ser Val Gln Gly Ile Ile Tyr Arg Ala Ala Tyr Phe Gly
 180 185 190
 Val Tyr Asp Thr Ala Lys Gly Met Leu Pro Asp Pro Lys Asn Val His
 195 200 205
 Ile Phe Val Ser Trp Met Ile Ala Gln Ser Val Thr Ala Val Ala Gly
 210 215 220
 Leu Leu Ser Tyr Pro Phe Asp Thr Val Arg Arg Met Met Met Gln
 225 230 235 240
 Ser Gly Arg Lys Gly Ala Asp Ile Met Tyr Thr Gly Thr Val Asp Cys
 245 250 255
 Trp Arg Lys Ile Ala Lys Asp Glu Gly Ala Lys Ala Phe Phe Lys Gly
 260 265 270
 Ala Trp Ser Asn Val Leu Arg Gly Met Gly Gly Ala Phe Val Leu Val
 275 280 285
 Leu Tyr Asp Glu Ile Lys Lys Tyr Val
 290 295

<210> 32
 <211> 298
 <212> PRT
 <213> Homo sapien

<400> 32

Met Thr Asp Ala Ala Leu Ser Phe Ala Lys Asp Phe Leu Ala Gly Gly
 1 5 10 15
 Val Ala Ala Ala Ile Ser Lys Thr Ala Val Ala Pro Ile Glu Arg Val
 20 25 30
 Lys Leu Leu Leu Gln Val Gln His Ala Ser Lys Gln Ile Thr Ala Asp
 35 40 45
 Lys Gln Tyr Lys Gly Ile Ile Asp Cys Val Val Arg Ile Pro Lys Glu
 50 55 60
 Gln Glu Val Leu Ser Phe Trp Arg Gly Asn Leu Ala Asn Val Ile Arg
 65 70 75 80
 Tyr Phe Pro Thr Gln Ala Leu Asn Phe Ala Phe Lys Asp Lys Tyr Lys
 85 90 95
 Gln Ile Phe Leu Gly Gly Val Asp Lys Arg Thr Gln Phe Trp Arg Tyr
 100 105 110
 Phe Ala Gly Asn Leu Ala Ser Gly Gly Ala Ala Gly Ala Thr Ser Leu
 115 120 125
 Cys Phe Val Tyr Pro Leu Asp Phe Ala Arg Thr Arg Leu Ala Ala Asp
 130 135 140
 Val Gly Lys Ala Gly Ala Glu Arg Glu Phe Arg Gly Leu Gly Asp Cys
 145 150 155 160
 Leu Val Lys Ile Tyr Lys Ser Asp Gly Ile Lys Gly Leu Tyr Gln Gly
 165 170 175
 Phe Asn Val Ser Val Gln Gly Ile Ile Tyr Arg Ala Ala Tyr Phe
 180 185 190
 Gly Ile Tyr Asp Thr Ala Lys Gly Met Leu Pro Asp Pro Lys Asn Thr
 195 200 205
 His Ile Val Ile Ser Trp Met Ile Ala Gln Thr Val Thr Ala Val Ala
 210 215 220
 Gly Leu Thr Ser Tyr Pro Phe Asp Thr Val Arg Arg Arg Met Met Met
 225 230 235 240
 Gln Ser Gly Arg Lys Gly Thr Asp Ile Met Tyr Thr Gly Thr Leu Asp
 245 250 255
 Cys Trp Arg Lys Ile Ala Arg Asp Glu Gly Lys Ala Phe Phe Lys
 260 265 270
 Gly Ala Trp Ser Asn Val Leu Arg Gly Met Gly Gly Ala Phe Val Leu
 275 280 285
 Val Leu Tyr Asp Glu Ile Lys Lys Tyr Thr
 290 295

<210> 33
 <211> 298
 <212> PRT
 <213> Homo sapien

<400> 33

Met Thr Glu Gln Ala Ile Ser Phe Ala Lys Asp Phe Leu Ala Gly Gly
 1 5 10 15
 Ile Ala Ala Ala Ile Ser Lys Thr Ala Val Ala Pro Ile Glu Arg Val
 20 25 30
 Lys Leu Leu Leu Gln Val Gln His Ala Ser Lys Gln Ile Ala Ala Asp
 35 40 45
 Lys Gln Tyr Lys Gly Ile Val Asp Cys Ile Val Arg Ile Pro Lys Glu
 50 55 60
 Gln Gly Val Leu Ser Phe Trp Arg Gly Asn Leu Ala Asn Val Ile Arg
 65 70 75 80

Tyr Phe Pro Thr Gln Ala Leu Asn Phe Ala Phe Lys Asp Lys Tyr Lys
 85 90 95
 Gln Ile Phe Leu Gly Gly Val Asp Lys His Thr Gln Phe Trp Arg Tyr
 100 105 110
 Phe Ala Gly Asn Leu Ala Ser Gly Gly Ala Ala Gly Ala Thr Ser Leu
 115 120 125
 Cys Phe Val Tyr Pro Leu Asp Phe Ala Arg Thr Arg Leu Ala Ala Asp
 130 135 140
 Val Gly Lys Ser Gly Thr Glu Arg Glu Phe Arg Gly Leu Gly Asp Cys
 145 150 155 160
 Leu Val Lys Ile Thr Lys Ser Asp Gly Ile Arg Gly Leu Tyr Gln Gly
 165 170 175
 Phe Ser Val Ser Val Gln Gly Ile Ile Tyr Arg Ala Ala Tyr Phe
 180 185 190
 Gly Val Tyr Asp Thr Ala Lys Gly Met Leu Pro Asp Pro Lys Asn Thr
 195 200 205
 His Ile Val Val Ser Trp Met Ile Ala Gln Thr Val Thr Ala Val Ala
 210 215 220
 Gly Val Val Ser Tyr Pro Phe Asp Thr Val Arg Arg Arg Met Met Met
 225 230 235 240
 Gln Ser Gly Arg Lys Gly Ala Asp Ile Met Tyr Thr Gly Thr Val Asp
 245 250 255
 Cys Trp Arg Lys Ile Phe Arg Asp Glu Gly Gly Lys Ala Phe Phe Lys
 260 265 270
 Gly Ala Trp Ser Asn Val Leu Arg Gly Met Gly Gly Ala Phe Val Leu
 275 280 285
 Val Leu Tyr Asp Glu Leu Lys Lys Val Ile
 290 295

<210> 34

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR amplification of human ANT3 for expression construct

<400> 34

ttaatggtag catgacggaa caggccatct ctttcgccaa a

41

<210> 35

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR amplification of human ANT3 for expression construct

<400> 35

ttataactcga gttagatcac cttcttgagc tcgtcgta a gg

42

<210> 36

<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR amplification of EYFP

<400> 36

gggcccctcg agatggtgag caagggcgag

30

<210> 37
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR amplification of EYFP

<400> 37

gggcccctcta gactacttgt acagctcgtc cat

33